



Response
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Loren
5/29/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of) Art Unit: 2825
Takeshi FUKADA et al.) Examiner: L. Malsawma
Serial No. 09/904,906)
Filed: July 16, 2001)
For: GLASS SUBSTRATE ASSEMBLY,)
SEMICONDUCTOR DEVICE AND)
METHOD OF HEAT-TREATING GLASS)
SUBSTRATE)

CERTIFICATE OF MAILING

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RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Official Action mailed January 16, 2003 has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to May 16, 2003. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on July 16, 2001, January 31, 2002, April 12, 2002, May 3, 2002, and November 25, 2002.

Claims 1-20 are now pending in the present application, of which claims 1-4 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance.

Paragraph 2 of the Official Action rejects claims 1-8 and 13-20 as obvious based on the combination of U.S. Patent No. 4,591,537 to Aldinger et al. and U.S. Patent No. 5,946,561 to Yamazaki et al. The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2143-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or

motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. The present invention relates to a substrate assembly for a display. The substrate assembly comprises a substrate. Further, the substrate assembly comprises a film provided over the substrate and comprising aluminum nitride and oxygen. The present inventors have found that one advantage of adding oxygen to a film comprising aluminum nitride is increasing adhesiveness of the film to the substrate.


It appears that Aldinger teaches pressing a powder comprising aluminum nitride into plates (col. 2, lines 18-24) which are used to form a substrate. It also appears that Aldinger teaches forming a substrate made of aluminum nitride with an oxide additive. The Official Action concedes that Aldinger does not disclose "that the substrate is specifically for a display and that the substrate is a combination of a glass substrate and a film comprising the aluminum nitride and oxygen" (p. 2, Paper No. 7). Yamazaki appears to teach an aluminum nitride film on a substrate. However, Aldinger and Yamazaki, either alone or in combination, do not teach or suggest both a substrate and a film provided over the substrate that comprises aluminum nitride and oxygen. The Official Action states that it would have been obvious to modify Aldinger to use the

substrate 1 for a display device similar to that shown by Yamazaki. However, even if such motivation could be found, the combination advanced by the Official Action would still not teach or suggest both a substrate and a film provided over the substrate that comprises aluminum nitride and oxygen as recited in the pending claims. Since Aldinger and Yamazaki do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) is in order and respectfully requested.

Paragraph 3 of the Official Action rejects claims 9-12 as obvious based on the combination of Aldinger, Yamazaki and U.S. Patent No. 5,283,214 to Knudsen. Knudsen does not cure the deficiencies in Aldinger and Yamazaki. The Official Action relies on Knudsen to teach a thermal conductivity of 200 W/mK or more (p. 3, Paper No. 7). Aldinger, Yamazaki and Knudsen, either alone or in combination, do not teach or suggest a film provided over the substrate and comprising aluminum nitride and oxygen. Since Aldinger, Yamazaki and Knudsen do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) is in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,



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